THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

DEPARTMENT OF MICROBIOLOGY

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Dear Bill:

I am responding to your question regarding JBC policy on accessibility of microorganisms described in Journal articles. It seems to me there are two levels to consider: what is in the best interests of science, and, if that can be settled, what can the JBC effectively do to promote those interests. I guess that nearly everyone would agree that total availability of microbial strains described in publications is likely to advance science, not only by facilitating confirmation of reported results, but more importantly, by facilitating new experiments, some of which may not occur to the orignal author. On the other hand, first rate science is carried out by individuals of varying temperament, including those who get satisfaction from long term development of a problem, which may involve novel and laborious construction of new strains of mutant or recombinant microbes essential for their work. In the case of molecular cloning of DNA, creative labor often goes toward constructing special vectors, or strains carrying particular genes or synthetic DNA. Some of these individuals may want to limit distribution of strains that were difficult to construct or especially important for their future work. Add to this an increasing number of recombinants with potential commercial value and you have a widespread interest in controlling the availability of new strains. (What effect the recent patent decision will have on this I don't know.) Nonetheless, I strongly believe it is desirable to have mutants or recombinants freely available once they have been reported in the literature. Others should not have to start at the beginning to produce the same recombinant plasmid or to isolate the same mutant. But is it desirable to coerce people into giving out their materials? I don't think so. Moreover, I don't believe it is possible to do so, at least not without great harm to the free-wheeling individualism essential to creative science. Except for encouraging what is desirable, I think we ought to leave these transactions to the parties concerned. Perhaps if the situation gets worse than it now is, I'll change my mind.

In all of the foregoing I do not include new isolates from nature of microbes or tissue culture cells, which would be absolutely required to repeat the research described in a published paper. Here I believe the principle of verifiability

of research results operates, and there should be a clear obligation to make such isolates available.

From these general considerations I would suggest a JBC policy that 1) encourages authors to make all new mutants or recombinant organisms described in their reports available to others and 2) requires that natural isolates of organisms or cultured cells described in a publication be deposited in a culture collection or be made available to interested investigators, the guiding principle being the possibility of verifying the authors' results. As to "how, precisely, the text [of the policy statement] should be changed", I suggest the following:

In regard to microorganisms or tissue culture strains referred to in a manuscript, the policy of the Journal is based on the principle that published results must be verifiable. Therefore, organisms or cells should be identified by an appropriate culture collection number or by reference to an earlier publication characterizing the strains used. In the case of new isolates from nature, or isolates previously reported but not included in a culture collection, it is understood that the authors will make the strains available to interested investigators on request. The Journal also encourages authors to make available to other ivestigators any laboratory-derived mutants or recombinant organisms referred to in their manuscript.

Please call me if you want to discuss this issue further. Good luck.

Sincerely,

Dan

Daniel Nathans

DN/lc